



9

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Tadayoni-Rebek *et al.*

Appl. No. 09/927,436

Filed: August 13, 2001

For: **Highly Homogenous Molecular
Markers for Electrophoresis**

Confirmation No. 6227

Art Unit: 1645

Examiner: *To be assigned*

Atty. Docket: 0942.5300001/RWE/AGU

Information Disclosure Statement

Commissioner for Patents
Washington, D.C. 20231

Sir:

Listed on accompanying Form PTO-1449 are documents that may be considered material to the examination of this application, in compliance with the duty of disclosure requirements of 37 C.F.R. §§ 1.56, 1.97 and 1.98. A copy of each of these documents is provided.

Where the publication date of a listed document does not provide a month of publication, the year of publication of the listed document is sufficiently earlier than the effective U.S. filing date and any foreign priority date so that the month of publication is not in issue. Applicants have listed publication dates on the attached PTO-1449 based on information presently available to the undersigned. However, the listed publication dates should not be construed as an admission that the information was actually published on the date indicated.

Applicants reserve the right to establish the patentability of the claimed invention over any of the information provided herewith, and/or to prove that this information may not be prior art, and/or to prove that this information may not be enabling for the teachings purportedly offered.

This statement should not be construed as a representation that a search has been made, or that information more material to the examination of the present patent application does not exist. The Examiner is specifically requested not to rely solely on the material submitted herewith. It is further understood that the Examiner will consider information that had been cited or submitted to the U.S. Patent and Trademark Office in a prior application relied on under 35 U.S.C. §120. 1138 OG 37, 38 (May 19, 1992).

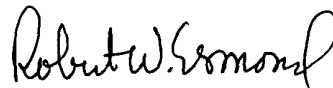
This Information Disclosure Statement is being filed before the mailing date of a first Office Action on the merits. No statement or fee is required.

It is respectfully requested that the Examiner initial and return a copy of the enclosed PTO-1449, and indicate in the official file wrapper of this patent application that the documents have been considered.

The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.



Robert W. Esmond
Attorney for Applicants
Registration No. 32,893

Date: March 4, 2002

1100 New York Avenue, N.W.
Suite 600
Washington, D.C. 20005-3934
(202) 371-2600



FORM PTO-1449

INFORMATION DISCLOSURE STATEMENT

ATTY. DOCKET NO.
0942.5300001/RWE/AGU

APPLICATION NO.
09/927,436

APPLICANT
Tadayoni-Rebek et al.

FILING DATE
August 13, 2001

GROUP
1645

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB- CLASS	FILING DATE
	AA1	5,616,228	04/01/1997	Nasu et al.	204	603	09/28/1995
	AB1	5,643,758	07/01/1997	Guan et al.	435	69.7	01/12/1995
	AC1	5,834,247	11/10/1998	Comb et al.	435	69.7	03/05/1997
	AD1	5,992,858	07/13/1999	Rothschild et al.	536	24.1	06/27/1997
	AE1	6,013,165	01/11/2000	Wiktorowicz et al.	204	456	05/22/1998
	AF1	6,043,025	03/28/2000	Minden et al.	435	4	10/10/1997
	AG1	6,045,995	04/04/2000	Cummins et al.	435	6	08/24/1994
	AH1	6,184,355 B1	02/06/2001	James, Jr. et al.	530	370	07/21/1999
	AI						
	AJ						
	AK						

FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB- CLASS	TRANSLATION
	AL1	WO 96/34878	11/07/1996	WIPO			Yes No
	AM1	WO 01/07920	02/01/2001	WIPO			Yes No
	AN1						Yes No
	AO1						Yes No
	AP1						Yes No

OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

AR	<u>1</u>	Ayers, B. et al., "Introduction of Unnatural Amino Acids into Proteins Using Expressed Protein Ligation," <i>Biopolymers (Peptide Science)</i> 51:343-354, John Wiley & Sons, Inc. (February 1999).
AS	<u>1</u>	Blaschke, U.K. et al., "Protein Engineering by Expressed Protein Ligation," <i>Meth. Enzymol.</i> 328:478-496, Academic Press (October 2000).
AT	<u>1</u>	Camarero, J.A. et al., "Peptide Chemical Ligation Inside Living Cells: In Vivo Generation of a Circular Protein Domain," <i>Bioorg. Med. Chem.</i> 9:2479-2484, Elsevier Science Ltd. (September 2001).

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

FORM PTO-1449

INFORMATION DISCLOSURE STATEMENT

ATTY. DOCKET NO.
0942.5300001/RWE/AGUAPPLICATION NO.
09/927,436APPLICANT
Tadayoni-Rebek *et al.*FILING DATE
August 13, 2001GROUP
1645

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB-CLASS	FILING DATE
	AA						
	AB						
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						
	AJ						
	AK						

FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB-CLASS	TRANSLATION
	AL						Yes No
	AM						Yes No
	AN						Yes No
	AO						Yes No
	AP						Yes No

OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

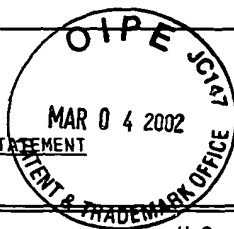
AR	2	Cotton, G.J. and Muir, T.W., "Generation of a dual-labeled fluorescence biosensor for Crk-II phosphorylation using solid-phase expressed protein ligation," <i>Chem. & Biol.</i> 7:253-261, Elsevier Science Ltd. (March 2000).
AS	2	Cotton, G.J. and Muir, T.W., "Peptide ligation and its application to protein engineering," <i>Chem. & Biol.</i> 6:R247-R256, Elsevier Science Ltd. (September 1999).
AT	2	Cowburn, D. and Muir, T.W., "Segmental Isotopic Labeling Using Expressed Protein Ligation," <i>Meth. Enzymol.</i> 339:41-54, Academic Press (June 2001).

EXAMINER	DATE CONSIDERED
----------	-----------------

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

FORM PTO-1449

INFORMATION DISCLOSURE STATEMENT

ATTY. DOCKET NO.
0942.5300001/RWE/AGUAPPLICATION NO.
09/927,436APPLICANT
Tadayoni-Rebek *et al.*FILING DATE
August 13, 2001GROUP
1645

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB-CLASS	FILING DATE
	AA						
	AB						
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						
	AJ						
	AK						

FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB-CLASS	TRANSLATION
	AL						Yes No
	AM						Yes No
	AN						Yes No
	AO						Yes No
	AP						Yes No

OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

	AR	<u>3</u>	Dawson, P.E <i>et al.</i> , "Synthesis of Proteins by Native Chemical Ligation," <i>Science</i> 266:776-779, American Association for the Advancement of Science (1994).
	AS	<u>3</u>	Dimitrov, S.I. and Wolffe, A.P., "Fine Resolution of Histones by Two-Dimensional Polyacrylamide Gel Electrophoresis: Developmental Implications," <i>Meth.: A Companion to Meth. Enzymol.</i> 12:57-61, Academic Press (1997).
	AT	<u>3</u>	Evans, T.C. <i>et al.</i> , "The <i>in Vitro</i> Ligation of Bacterially Expressed Proteins Using an Intein from <i>Methanobacterium thermoautotrophicum</i> ," <i>J. Biol. Chem.</i> 274:3923-3926, The American Society for Biochemistry and Molecular Biology, Inc. (February 1999).

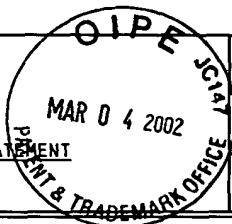
EXAMINER

DATE CONSIDERED

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

FORM PTO-1449

INFORMATION DISCLOSURE STATEMENT


 ATTY. DOCKET NO.
0942.5300001/RWE/AGU

 APPLICATION NO.
09/927,436

 APPLICANT
Tadayoni-Rebek *et al.*

 FILING DATE
August 13, 2001

 GROUP
1645

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB-CLASS	FILING DATE
	AA						
	AB						
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						
	AJ						
	AK						

FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB-CLASS	TRANSLATION
	AL						Yes No
	AM						Yes No
	AN						Yes No
	AO						Yes No
	AP						Yes No

OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

	AR	<u>4</u>	Evans, T.C. <i>et al.</i> , "The Cyclization and Polymerization of Bacterially Expressed Proteins Using Modified Self-splicing Inteins," <i>J. Biol. Chem.</i> 274:18359-18363, The American Society for Biochemistry and Molecular Biology, Inc. (June 1999).
	AS	<u>4</u>	Fehring, V. <i>et al.</i> , "Physical markers for landmarking fluorescently stained gels that facilitate automated spot-picking," <i>Electrophoresis</i> 22:2903-2907, Wiley-VCH Verlag GmbH (August 2001).
	AT	<u>4</u>	Geoghegan, K.F. <i>et al.</i> , "Dye-Pair Reporter Systems for Protein-Peptide Molecular Interactions," <i>Bioconjugate Chem.</i> 11:71-77, American Chemical Society (December 1999).

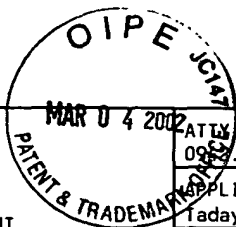
EXAMINER

DATE CONSIDERED

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

FORM PTO-1449

INFORMATION DISCLOSURE STATEMENT


 ATTORNEY DOCKET NO.
09/927.5300001/RWE/AGU

 APPLICATION NO.
09/927,436

 APPLICANT
Tadayoni-Rebek *et al.*

 FILING DATE
August 13, 2001

 GROUP
1645

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB-CLASS	FILING DATE
	AA						
	AB						
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						
	AJ						
	AK						

FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB-CLASS	TRANSLATION
	AL						Yes No
	AM						Yes No
	AN						Yes No
	AO						Yes No
	AP						Yes No

OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

	AR	<u>5</u>	Geoghegan, K.F. and Stroh, J.G., "Site-Directed Conjugation of Nonpeptide Groups to Peptides and Proteins via Periodate Oxidation of a 2-Amino Alcohol. Application to Modification at N-Terminal Serine," <i>Bioconjugate Chem.</i> 3:138-146, American Chemical Society (1992).
	AS	<u>5</u>	Low, D.W. <i>et al.</i> , "Total synthesis of cytochrome b562 by native chemical ligation using a removable auxiliary," <i>PNAS</i> 98:6554-6559, The National Academy of Sciences of the USA (June 2001).
	AT	<u>5</u>	Lu, W. <i>et al.</i> , "Comparative Total Syntheses of Turkey Ovomucoid Third Domain by Both Stepwise Solid Phase Peptide Synthesis and Native Chemical Ligation," <i>J. Am. Chem. Soc.</i> 118:8518-8523, American Chemical Society (1996).

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

FORM PTO-1449

INFORMATION DISCLOSURE STATEMENT

ATTY. DOCKET NO.
0942.5300001/RWE/AGUAPPLICATION NO.
09/927,436APPLICANT
Tadayoni-Rebek *et al.*FILING DATE
August 13, 2001GROUP
1645

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB-CLASS	FILING DATE
	AA						
	AB						
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						
	AJ						
	AK						

FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB-CLASS	TRANSLATION
	AL						Yes No
	AM						Yes No
	AN						Yes No
	AO						Yes No
	AP						Yes No

OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

	AR	<u>6</u>	Muir, T.W. <i>et al.</i> , "Expressed protein ligation: A general method for protein engineering," <i>PNAS</i> 95:6705-6710, The National Academy of Sciences of the USA (1998).
	AS	<u>6</u>	Roy, R.S. <i>et al.</i> , "Expressed protein ligation to probe regiospecificity of heterocyclization in the peptide antibiotic microcin B17," <i>Chem. & Biol.</i> 6:789-799, Elsevier Science Ltd (October 1999).
	AT	<u>6</u>	Severin, K. <i>et al.</i> , "Peptide Self-Replication via Template-Directed Ligation," <i>Chem. Eur. J.</i> 3:1017-1024, Wiley-VCH (1997).

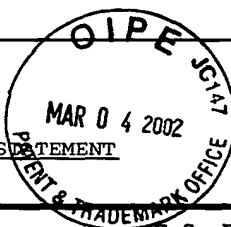
EXAMINER

DATE CONSIDERED

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

FORM PTO-1449

INFORMATION DISCLOSURE STATEMENT

ATTY. DOCKET NO.
0942.5300001/RWE/AGUAPPLICATION NO.
09/927,436APPLICANT
Tadayoni-Rebek et al.FILING DATE
August 13, 2001GROUP
1645

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB- CLASS	FILING DATE
	AA						
	AB						
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						
	AJ						
	AK						

FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB- CLASS	TRANSLATION
	AL						Yes No
	AM						Yes No
	AN						Yes No
	AO						Yes No
	AP						Yes No

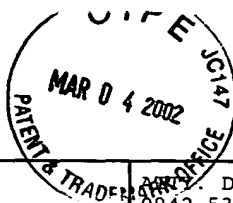
OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

	AR	7	Severinov, K. and Muir, T.W., "Expressed Protein Ligation, a Novel Method for Studying Protein-Protein Interactions in Transcription," <i>J. Biol. Chem.</i> 273:16205-16209, The American Society for Biochemistry and Molecular Biology, Inc. (1998).
	AS	7	Shimura, K. et al., "Synthetic oligopeptides as isoelectric point markers for capillary isoelectric focusing with ultraviolet absorption detection," <i>Electrophoresis</i> 21:603-610, Wiley-VCH Verlag GmbH (February 2000).
	AT	7	Shimura, K. and Kasai, K.-i., "Fluorescence-labeled peptides as isoelectric point (pI) markers in capillary isoelectric focusing with fluorescence detection," <i>Electrophoresis</i> 16:1479-1484, Wiley-VCH Verlag GmbH (1995).

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.



FORM PTO-1449

INFORMATION DISCLOSURE STATEMENTDOCKET NO.
0942.5300001/RWE/AGUAPPLICATION NO.
09/927,436APPLICANT
Tadayoni-Rebek et al.FILING DATE
August 13, 2001GROUP
1645

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB- CLASS	FILING DATE
	AA						
	AB						
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						
	AJ						
	AK						

FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB- CLASS	TRANSLATION
	AL						Yes No
	AM						Yes No
	AN						Yes No
	AO						Yes No
	AP						Yes No

OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

	AR	8	Sillero, A. and Ribeiro, J.M., "Isoelectric Points of Proteins: Theoretical Determination," <i>Anal. Biochem.</i> 179:319-325, Academic Press, Inc. (1989).
	AS	8	Tolbert, T.J. and Wong, C.-H., "Intein-Mediated Synthesis of Proteins Containing Carbohydrates and Other Molecular Probes," <i>J. Am. Chem. Soc.</i> 122:5421-5428, American Chemical Society (May 2000).
	AT	8	Xu, R. et al., "Chemical ligation of folded recombinant proteins: Segmental isotopic labeling of domains for NMR studies," <i>PNAS</i> 96:388-393, The National Academy of Sciences of the USA (January 1999).

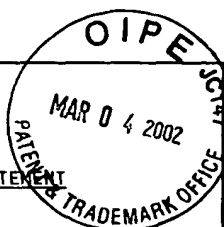
EXAMINER

DATE CONSIDERED

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

FORM PTO-1449

INFORMATION DISCLOSURE STATEMENT

ATTY. DOCKET NO.
0942.5300001/RWE/AGUAPPLICATION NO.
09/927,436APPLICANT
Tadayoni-Rebek *et al.*FILING DATE
August 13, 2001GROUP
1645

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB-CLASS	FILING DATE
	AA						
	AB						
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						
	AJ						
	AK						

FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB-CLASS	TRANSLATION
	AL						Yes No
	AM						Yes No
	AN						Yes No
	AO						Yes No
	AP						Yes No

OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

	AR	2	New England Biolabs 2000-01 Catalog, "IMPACT Vectors," pages 108, 142-144, New England Biolabs, Inc. (2000).
	AS	2	New England Biolabs 1998-99 Catalog, "IMPACT™ T7 System," pages 138-139, New England Biolabs, Inc. (1998).
	AT		

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.